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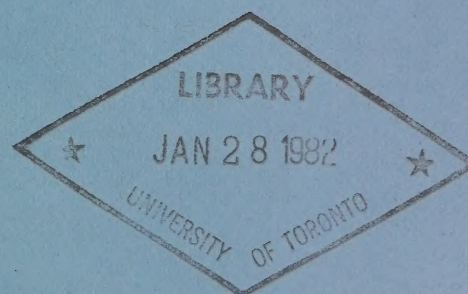
NATIONAL ENERGY BOARD
REASONS FOR DECISION

In the Matter of an Application under
the National Energy Board Act

of

TransCanada PipeLines Limited
(North Bay Shortcut)

December 1981



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NATIONAL ENERGY BOARD

IN THE MATTER OF the National Energy Board Act
and the Regulations made thereunder; and

IN THE MATTER OF an application by TransCanada
PipeLines Limited for a Certificate of Public
Convenience and Necessity under Part III of the
said Act, filed with the Board under File
No. 1555-T1-98.

HEARD AT Ottawa, Ontario on:

20, 22 and 23 October and 16, 17, 18, 19, 20, and
21 November, 1981.

BEFORE:

R.F. Brooks	)	Presiding Member
J.R. Jenkins	)	Member
R.B. Horner	)	Member

APPEARANCES:

J.W.S. McOaut, Q.C.)	
J.M. Murray	)	TransCanada PipeLines Limited
T. Dalglish)	
R. Bouchard	)	Bromley Group of Landowners
D.B. Macnamara	)	Canadian Petroleum Association
M. Burke	)	City of North Bay
J.H. Farrell	)	The Consumers' Gas Company
	)	Limited
J.H. Smellie	)	Dome Petroleum Limited
C.W. Howse	)	Dundas County Federation
	)	of Agriculture
Y. Brisson	)	Gaz Inter-Cité Québec Inc.
M. Peterson	)	Gaz Métropolitain, inc.
R.-J. Chénier)	
W.C. Haggart	)	Private Individual
J. Hayduk	)	Private Individual
W. Hodgins	)	Private Individual

(ii)

C.W. Howse	)	Private Individuals
K.D. Switzer-Howse)	
R.C. Wong	)	Northern and Central Gas
	)	Corporation Limited
J. Jarvalt	)	Ontario Federation of
D. Ferns	)	Agriculture
A. O'Brien	)	Shezar Development Company
	)	Limited
M.R. Stevenson	)	Private Individual
L.A. Leclerc	)	Trans Québec & Maritimes
	)	Pipeline Inc.
A. Mudryj	)	Union Gas Limited
J.M. Johnson, Q.C.	)	Minister of Energy for Ontario
M. Rounding)	
J. Giroux)	Procureur général du Québec
A. Bigué)	
A.R. Macdonald)	National Energy Board

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ABBREVIATIONS

"the Act"	- the National Energy Board Act
"the Board"	- National Energy Board
"CLI"	- Canada Land Inventory
"Great Lakes"	- Great Lakes Gas Transmission Company Limited
"GICQ"	- Gaz Inter-Cité Québec Inc.
"Gaz Métro"	- Gaz Métropolitain, inc.
"OMNR"	- Ontario Ministry of Natural Resources
"Ontario"	- Minister of Energy for Ontario
"TransCanada" or "the Applicant"	- TransCanada PipeLines Limited
"TQM"	- Trans Québec & Maritimes Pipeline Inc.
"Union"	- Union Gas Limited
"km"	- kilometre(s)
"mm"	- millimetre(s)
"O.D."	- Outside Diameter

CHAPTER 1

THE APPLICATION

In December 1980, TransCanada PipeLines Limited submitted to the Board an application for a Certificate of Public Convenience and Necessity under Part III of the Act. The application, for facilities designated as the "North Bay Shortcut", requested authorization for the construction and operation of a new natural gas pipeline routed generally along the south shore of the Ottawa River from the existing Compressor Station No. 116 at North Bay, Ontario to the junction of the Applicant's Montreal Line and Ottawa Lateral near Morrisburg, Ontario. The new pipeline would have a diameter of 1067 mm O.D. and a length of 408.6 km.

The purpose of the applied-for facilities would be to provide additional capacity on TransCanada's system downstream of North Bay to meet the requirements of Québec markets east of Montreal and Maritimes markets to be served by the Trans Québec & Maritimes Pipeline Inc. (TQM) system now under construction. These facilities would also provide for growth in the Montreal market. The proposed pipeline would allow for the delivery of gas for the first time to the communities of Mattawa, Deep River, Chalk River and Kemptville, all in Ontario. By providing a new delivery point near Petawawa, the facilities would alleviate a capacity constraint on an existing distribution system, thereby making it possible for the distributor to serve the Québec market of Portage-du-Fort.

On 15 May 1981, TransCanada filed a revised application reflecting a higher market forecast for the Provinces of Québec, New Brunswick and Nova Scotia which was provided to TransCanada by TQM. The requirements forecast was also revised to exclude provision for the export sales proposed by TransCanada to Boundary Gas, Inc. and Tennessee Gas Pipeline Company, and the proposed export sale associated with the Arctic Pilot Project, as these applications are subject to regulatory review and approval.

On 24 August 1981, TransCanada filed a further amended application, revised as a consequence of the latest requirements forecast provided by TQM and of a re-evaluation of the cost data underlying the pipeline design. In this latest application TransCanada proposed that a pipe diameter of 914 mm O.D. would be optimal for the North Bay Shortcut. The amended application also reflected several revisions to the proposed route resulting from more detailed survey work and negotiations with interested parties. As a result of these route changes, the length of the pipeline was increased to 420.2 km.

The construction schedule for the project was developed to provide for a proposed in-service date of December 15, 1982. Preliminary construction work involving clearing, grading and rockwork is planned for the winter of 1982 with pipe installation to be carried out for the most part during the summer of 1982.

The total capital cost of the project was estimated by the Applicant to be \$407,780,000 in 1981 dollars.

CHAPTER 2

ECONOMIC CONSIDERATIONS

In demonstrating to the Board the public convenience and necessity of a proposed pipeline, the onus is on an applicant to prove, among other things, the need for the proposed facilities and in particular to define the markets to be served and to demonstrate that they can be served economically. TransCanada submitted that in relation to the present application this requirement has to some degree already been met by the certification by the Board of the TQM gas pipeline to serve the Province of Québec east of Montreal and the Maritime provinces. In certificating that pipeline, the Board had made a determination, supported by government policy as expressed in the National Energy Program, that markets existed for gas in eastern Canada and that the public convenience and necessity required that they be served. Since the facilities proposed in this application were designed to provide the necessary capacity on TransCanada's existing system to supply gas to that pipeline, the only question before the Board in this hearing, it was argued, was whether the facilities applied for would provide the required capacity at the lowest cost.

No party to the hearing disputed this argument. Therefore the evidence at the hearing concerning the economics of the application was confined to the questions of the design of the proposed facilities, and the timing of their construction.

The broad alternatives available to TransCanada are to expand the capacity of the existing pipeline system which runs southerly from North Bay towards Toronto then east to Montreal, or to build an entirely new pipeline between North Bay and Montreal following a more direct route along the Ottawa River (see map - Appendix 1).

In support of the latter approach, TransCanada took as a starting point a forecast of the demand for natural gas in eastern Canada to the year 1990 which included a projection of demand in the expansion markets of Québec and the Maritimes provided to it by TQM. TransCanada presented calculations of the present values of the annual owning and operating costs over a 28-year period associated with the expansion of the existing system and with the construction of the proposed Shortcut. In response to a request from the Board, the Applicant presented the same calculations for two further forecasts of its capacity requirements, one assuming that natural gas would be available from offshore fields near Sable Island commencing in the year 1987-88, and the second making the assumption that, in addition, arctic gas from the Arctic Pilot Project would come on stream in the year 1986-87. The results of those calculations are presented in Table 1, and demonstrate that the construction of the North Bay Shortcut would be more economical than the expansion of the existing system.

TABLE 1

Present Value of Annual Owning
And Operating Costs Over 28 Years
(Million Dollars)

<u>Forecast of Requirements</u>	<u>Expand Existing System</u>	<u>North Bay Shortcut (914 mm)</u>
TransCanada	1379.0	856.8
Including Sable Island	1049.6	675.6
Including Sable Island and Arctic Pilot Project	892.5	619.5
N.E.B.	1204.3	729.3

The Applicant's forecast of market requirements in eastern Canada is somewhat higher than that projected by the Board in its report, "Canadian Energy Supply and Demand, June 1981". However, TransCanada presented similar calculations to demonstrate that the Shortcut remains the more economical alternative under the Board's assumptions.

The Applicant's original calculations were based on a forecast of natural gas prices which predated the signing in September of the agreement between the Government of Canada and the Province of Alberta which resulted in higher prices for gas. The Board is satisfied, however, that this development increases the attractiveness of the Shortcut option since its lower cost, as opposed to the expansion of the existing system, results in part from the saving of fuel realized through the transmission of gas

over a shorter distance. Furthermore, the Board is satisfied that these higher prices will not appreciably affect the level of demand for gas in eastern markets. Since the evidence indicates that the construction of the Shortcut would be justified if it carried only the volumes projected for markets as far east as Québec City, the Board is confident that the new prices for gas would not detrimentally affect the economics of this project.

The Board accepts TransCanada's evidence that the construction of the Shortcut would increase only slightly the unit cost of transmission to present customers, and that in any event the increase after the first few years of service would be lower for the Shortcut than for the alternative of expanding the existing system.

An additional benefit to be derived from the construction of the Shortcut would be the ability to provide gas service to the Ontario and Western Québec communities referred to in Chapter 1.

For these reasons the Board is satisfied that additional pipeline capacity is needed on the TransCanada system upstream of Montreal, and that the construction of the North Bay Shortcut would be the most economical way of providing that increased capacity.

In certificating new pipeline facilities in the past the Board has on occasion imposed a condition requiring that before construction may commence, the company must enter into firm contracts with distributors for the sale of certain volumes of gas to be carried by the pipeline. Such a condition was suggested for this pipeline by The Consumers' Gas Company Limited. The Board is

satisfied that such a condition is unnecessary and undesirable in this case. TransCanada showed that additional capacity is needed to meet the requirements of existing markets in the Montreal area in the year 1982-83, and that if the Shortcut were not available that capacity would have to be provided by expanding the existing system. These facilities would then be underutilized once the Shortcut was built. The Board is confident, without the condition proposed, that the markets east of Montreal will develop sufficiently to render the Shortcut economic, even though the uncertainties of expanding into new markets may prevent the signing of firm gas sales contracts immediately.

CHAPTER 3

FACILITIES AND FINANCING

The facilities applied for would consist of 420.2 km of pipeline extending from the existing Compressor Station No. 116 at North Bay to a junction with TransCanada's Ottawa Lateral near Winchester. The lateral would be looped to a junction with TransCanada's Montreal Line at Morrisburg, Ontario. Also to be constructed would be the meter stations and connecting facilities for service to the various markets along the route. All of these facilities would be constructed using conventional materials and construction techniques.

Under TransCanada's forecast of delivery requirements, the proposed Shortcut would carry about 13.8 million cubic metres of natural gas on a winter peak day in the operating year 1982-83, rising to approximately 31 million cubic metres in 1990-91.

Some concern was expressed by Union Gas Limited (Union) that the construction of the Shortcut would lead TransCanada to focus future expansion in the Central Section on the Canadian system, at the expense of utilization of the Great Lakes system. Union felt that this could result in decreased use by TransCanada of the existing transportation service provided by Union to TransCanada. However, TransCanada's evidence suggested that it would continue to require transportation from Union to cover outages on the Central Section or on the Shortcut. The Board is confident that the construction of the North Bay Shortcut would not result in any significant detriment to Union's operations.

3.1 Pipe Diameter

TransCanada's original application, filed in December, 1980, contemplated the use of 1067 mm O.D. pipe for the Shortcut. At the request of the Board, the Company reviewed this proposal, taking into account more recent estimates of the costs of materials and installation, and a more complete forecast of capacity requirements. This review resulted in the filing by TransCanada in August, 1981 of a revised application in which the pipe size selected had been reduced to 914 mm O.D.

The revised application presents calculations of the present value of estimated annual owning and operating costs over 28 years for four alternative facilities designs which would provide the necessary capacity:

- (a) expansion of the existing system
- (b) 1067 mm O.D. Shortcut
- (c) 914 mm O.D. Shortcut
- (d) 762 mm O.D. Shortcut

For each of these alternatives, calculations were provided based on each of the three forecasts of requirement described on Page 4. In addition, the Company provided during the hearing a fourth calculation for each facilities design based on the Board's forecast of eastern Canadian demand contained in its report "Canadian Energy Supply and Demand, June 1981". The results of these calculations are presented in Table 2. The table demonstrates that a pipe size of 914 mm O.D. would be most economic under all of the various requirement assumptions.

TABLE 2

Present Value of Annual Owning
And Operating Costs Over 28 Years
(Million Dollars)

<u>Forecast of Requirements</u>	<u>Expand Existing System</u>	<u>Shortcut</u>		
		<u>1067</u> <u>mm</u>	<u>914</u> <u>mm</u>	<u>762</u> <u>mm</u>
TransCanada	1379.0	869.1	856.8	1104.8
Including Sable Island	1049.6	745.9	675.6	827.0
Including Sable Island and Arctic Pilot Project	892.5	717.8	619.5	726.0
N.E.B.	1204.3	Not provided	729.3	944.7

Since the choice of pipe size, with the resulting changes in fuel use, could be sensitive to changes in the price of fuel, the Applicant was asked to file cost calculations for pipe sizes of 1067 mm O.D. and 914 mm O.D. based on the higher prices for gas established by the Federal/Alberta Agreement. The results indicated that the 914 mm pipe would be marginally more expensive should market requirements correspond to TransCanada's forecast, but more economical under each of the other three forecasts, including that produced by the Board.

In these circumstances, the Board is satisfied that the 914 mm size selected by TransCanada would be the appropriate size of pipe for the Shortcut.

3.2 Cost and Canadian Content

TransCanada estimated the cost of the facilities applied for to be \$407,780,000 in 1981 dollars. This estimate was based on recent quotations for most major materials, and on recent construction experience. The Board finds the estimate to be reasonable, but should a certificate be issued the Board would impose conditions in the certificate which would require the Applicant to file with the Board its procedures for cost control.

The Applicant estimated that 95% of the expenditures on the project would be in Canada, with 93% of the expenditures for materials and 95% of the expenditures for installation retained in the country. One uncertainty relating to the estimate of the Canadian content of materials purchases has been resolved since the hearing, with the settlement of the Stelco strike. The Board finds the level of Canadian content expected to be achieved to be satisfactory. If a certificate is issued, the Board would require the filing of a report after the completion of construction detailing the level of Canadian content actually achieved.

3.3 Financing

TransCanada indicated that the project would be financed initially through bank loans, and within two years refinanced on a long-term basis as part of the Company's ongoing debt and equity issues. The Board is satisfied with TransCanada's evidence as to its ability to raise long-term capital on favourable terms, and is satisfied that the project can be financed.

CHAPTER 4

ENVIRONMENTAL, RIGHT-OF-WAY AND SOCIO-ECONOMIC MATTERS

4.1 Environmental Matters

4.1.1 General Mitigation Measures

TransCanada undertook to implement all of the recommendations of its environmental consultants with respect to the proposed project with the following qualifications. Final design and construction planning for river crossings is continuing and revision to parts of the environmental report might be necessary. TransCanada stated that any revisions would be in general agreement with the practices outlined in the environmental report and its construction specifications. Further, should actual conditions encountered differ from those contemplated, or should the construction schedule prove not to be compatible with any of the recommendations, further environmental impact assessment would be carried out and appropriate mitigative measures identified where necessary. The Board notes TransCanada's undertaking to file such studies with the Board in advance of construction, where significant changes to the approved construction practices were contemplated.

The Board has considered the environmental evidence of the Applicant and is satisfied that, in general, the proposed facilities can be constructed and operated in an environmentally acceptable manner, given the implementation of effective mitigative measures.

There is one matter that is of concern to the Board. TransCanada's proposed construction schedule indicates that rockwork would commence in January 1982, while pipeline installation would for the most part not commence until June 1982. The Applicant stated that in the interim the trench could remain open for several months. TransCanada stated that the trench would not be left open in the vicinity of any road or populated area, and that there would be adequate crossing locations. The Board is concerned for the safety of persons and wildlife if the trench were to remain open for extended periods of time, and is not convinced that such a procedure is necessary. If a certificate were issued the Board would require TransCanada to re-examine this proposed procedure, and to file with the Board prior to construction a revised construction schedule, with supporting information to justify the amount of time during which rock trenches would be left open.

If a certificate were granted, the Board would expect TransCanada to incorporate the recommendations of its consultants into its construction specifications and contracts, and would require the Applicant after completion of construction, to submit a report describing the impact of construction on the environment and assessing the effectiveness of the Company's policies, practices, and procedures for preventing or mitigating adverse environmental effects.

4.1.2 Route Selection

The route selection process for the proposed North Bay Shortcut involved regional parameters in selecting a route, local considerations in locating a corridor and metre by metre on-the-ground assessment in establishing a final alignment and right-of-way. TransCanada stated that a preliminary assessment of all alternative routes was carried out by a multi-disciplinary team which considered socio-economic, engineering, environmental, agricultural and economic aspects. TransCanada testified that a basic criterion used during route selection was a concern for agriculture, which related to the avoidance of systematic tile drainage, viable farming communities, and Canada Land Inventory (CLI) Class 1 and 2 farm land.

TransCanada presented evidence of four alternative routes studied in the course of selecting the applied-for Route No. 4. These alternatives are shown in Appendix 1. Two intervenors, the Procureur général du Québec and Gaz Inter-Cité Québec Inc. (GICQ), questioned the Applicant closely on its reasons for having selected an Ontario route over Alternative No. 3, which for most of its route traverses the Province of Québec. TransCanada stated that the route through Québec would involve certain major environmental and engineering problems. In the Montebello-Calumet area, where there exists only a narrow highly-settled corridor between the hills and the Ottawa River, the acquisition of a pipeline right-of-way would be very difficult. The alternative would be to construct the pipeline through the neighbouring hills, which would

necessitate a great deal of blasting and considerable environmental damage to secure a reasonably level work area. This area also features several deep river valleys, in which a pipeline could not be constructed without significant environmental disturbance.

The evidence indicated that Route No. 3 would also require the crossing of the Gatineau Park, and farmlands included in the Québec Agricultural Land Reserve. In both cases, obtaining approval for pipeline construction would involve extensive negotiations.

TransCanada presented evidence, in the form of calculations of the present value of annual owning and operating costs over 28 years, to show that the Québec route would be more expensive by \$69.5 million than the route selected, including the cost of future looping on the Montreal Line between Morrisburg and St. Lazare. Although both routes could provide gas service to the same communities in Ontario and Québec (except Kemptville, Ontario which could not be served from the Québec route), the choice of the Ontario route would require the construction of a lateral from Ottawa to Hull and Thurso, and would also render necessary a planned lateral to Lachute from the TQM system. Even with the cost of these facilities, estimated at a present worth of \$23.2 million, the Company concluded that the Ontario route would be cheaper by \$46.3 million in 1981 dollars over the 28 years. The difference in cost was attributed by TransCanada primarily to the rougher terrain on the Québec route, and to difficulties in constructing the pipeline through the Gatineau Park and the area around Montebello.

The Province of Québec and GICQ argued that TransCanada's estimates as to the cost of construction on the Québec route were not as reliable as those presented for the chosen route which was studied in much greater detail. It was also argued that alternative pipeline designs more suitable to the Québec route were not adequately investigated. It must, however, be recognized that it would be prohibitively expensive to investigate every possible alternative in the same detail as the route ultimately chosen. In the present case, the Board is satisfied that, from the point of view of economics, the Applicant's preliminary route selection was adequately performed.

On the basis of the evidence submitted, the Board is satisfied with the route chosen by TransCanada. The Québec communities which were identified as potentially being served from the Québec route could be served from the chosen route through the construction of appropriate laterals. It is to be noted that the Province of Québec and GICQ ultimately supported the certification of the Shortcut as proposed, in light of TransCanada's evidence that a change to Route No. 3 would not permit the Shortcut to be constructed in time to provide additional required deliveries to Montreal in 1982-83.

The Province of Québec suggested that in future the Board require more detailed maps of alternative routes than were submitted by TransCanada. This suggestion may have merit in some cases.

4.1.3 Crossing of Mattawa River

The City of North Bay expressed concerns for the recreational potential of the Mattawa Wild River Park and the water quality of Trout Lake, which is the water supply source for the City.

The Applicant provided considerable evidence to support its view that the crossing of the Narrows between Trout Lake and Turtle Lake could be accomplished without affecting the water quality of Trout Lake. The Board notes TransCanada's intention to construct the Narrows crossing during the winter, to provide water sampling according to provincial requirements, and to provide a water quality expert on site during the crossing construction period as part of the inspection team.

The City of North Bay suggested two alternative routes which it deemed preferable to TransCanada's proposed route. The City had discussed these with the Ontario Ministry of Natural Resources (OMNR), the authority responsible for the Mattawa Wild River Park. The evidence indicated that the OMNR preferred the crossing at the Narrows as proposed by TransCanada to either of the alternatives suggested by the City of North Bay.

The Board accepts the Applicant's position that the proposed route in the area of the Mattawa Wild River Park and the crossing at the Narrows is the most acceptable alternative. The Board notes the City's concern about possible additional phosphorus loading of Trout Lake, but is confident that satisfactory measures can be derived in consultation with the City to prevent undue phosphorus entry into the waterway.

4.1.4 Bonnechere Ridge Deviation

In response to a request from the Bromley Group of Landowners, TransCanada proposed a deviation in the pipeline route in the Renfrew area which would have the pipeline cross the Bonnechere Ridge. The evidence indicated that the revised route would pass through primarily CLI Class 3 and 4 agricultural land, which is largely uncultivated, while the original route would have crossed primarily Class 2 agricultural land, much of which is tile drained. The revised route would also provide a more advantageous crossing of the Bonnechere River.

The Board is satisfied that the revised routing is on the whole preferable. While the Board does not feel that agricultural land must always take priority over land more suitable to other uses, it accepts TransCanada's stated policy of avoiding tile-drained land wherever it is feasible to do so.

4.1.5 Inspection

Various intervenors, including the Ontario Federation of Agriculture, the Dundas County Federation of Agriculture, the Province of Ontario and several landowners, expressed concerns about the impact of pipeline construction on agricultural lands.

TransCanada outlined in its application and evidence the policies, practices and procedures it intends to implement in constructing upon and rehabilitating agricultural soils. The Applicant has undertaken to brief the contractors and on-site

supervisors, down to the level of field foremen, on the environmental requirements of the project to ensure that there is a clear understanding of these requirements on the part of all those involved in the construction.

The Applicant's environmental consultant stated that the major environmental concern is field performance during construction and thus highlighted the importance of inspection. The Company stated that for this project its environmental inspection would be carried out by an interdisciplinary team including experts in agronomy, soils, hydrology, aquatic biology, agricultural drainage, forestry, terrestrial biology and geology. These inspectors would have specialized expertise relating to the environmental sensitivities present along the proposed pipeline route. The Board supports this initiative by TransCanada and hopes that this approach will be adopted for all of TransCanada's future construction.

The Dundas County Federation of Agriculture was concerned that the construction schedule could override environmental concerns. TransCanada stated that the Company's policy is the reverse of this proposition and that environmental concerns can override the construction schedule. The Applicant further stated that if serious damage were being caused to the environment it would shut down operations.

Several intervenors took the position that TransCanada's environmental inspectors should have the authority to stop construction activities which were causing undue damage to the

environment, and to stop work on the entire project if necessary. TransCanada stated that its inspectors do have the power to stop particular operations, but that the decision to shut down the entire project involves many considerations and must be arrived at through consultation with the construction supervisor and if necessary with the head office.

In accordance with TransCanada's statement, the Board expects that, if a certificate were issued, the Company's environmental inspectors would have the authority to stop particular operations, and that the exercise of that authority would be effective in practice. However the Board agrees with TransCanada that it is appropriate that a decision to shut down the entire project be arrived at through consultation.

The Province of Ontario strongly urged the Board to provide increased inspection of construction, and requested that the Board require TransCanada to provide it with information which would enable it to be satisfied that facilities design and construction procedures were adequate. Should a certificate be issued, the Board would be prepared to require the Applicant to fulfill its undertaking to the Province to provide in advance of construction its drawings and proposed construction specifications for river crossings. Furthermore, the Board would require that certain contract documents and any post-construction monitoring reports be made available to the Province, and would require

TransCanada to contact the Ontario Pipeline Coordination Committee 48 hours in advance of the commencement of construction of any major river crossing.

The Board is not prepared to accede to the Province's request to be provided automatically with copies of all communications between TransCanada and the Board which relate to the terms and conditions of a certificate. In the past, TransCanada and in some cases the Board itself have contacted the province where approval was requested of a modification to the conditions of a certificate which would affect the interests of the province. In the Board's view the continuation of that practice will adequately protect the environment.

The Board is encouraged by TransCanada's conditional acceptance of the proposal made by the Ontario Federation of Agriculture regarding the appointment by the Federation of an independent inspector for construction on agricultural lands. The Applicant stipulated that it should have some input into the selection of such an inspector, that he be knowledgeable in such matters of concern to farmers as tile drainage, and that his role would be confined to liaison between property owners and the Company. Such inspection could only contribute to the satisfaction of the concerns of individual landowners.

For its part the Board intends to make every effort to provide the appropriate level of inspection on this project, should it be certificated.

4.2 Right-of-Way Matters

4.2.1 Width of Right-of-Way

TransCanada stated that it would be necessary to acquire a 30-metre wide easement for the entire route with the exception of the looping of the Ottawa Lateral. The section adjacent to the Ottawa Lateral would only require a 25-metre right-of-way since part of the existing easement could be utilized for additional work room.

TransCanada testified that a 30-metre wide right-of-way is required for the installation of a 914 mm pipeline in heavily wooded areas where there is rock, and also in agricultural areas where topsoil and subsoil have to be separated and stored. The Applicant further stated that additional temporary working rights would be required at designated locations such as river, road, railway and drainage crossings.

The Board notes TransCanada's intention to negotiate a 30-metre wide permanent easement. However, if in any case the rights to land in excess of 18.29 metres in width could not be acquired by agreement, it would be necessary for the Company to apply to the Board for permission to expropriate the excess, and TransCanada would be required to prove at that time that the additional land is indeed required.

4.2.2 Landowner Contacts

TransCanada stated that the level of landowner notification regarding the present application considerably exceeded the requirements of the Board, and anything the Company had done in the past. The notice of the hearing date had been published in the newspapers listed in the Board's Hearing Order as well as in additional local papers and "Farm and Country". In addition, TransCanada mailed notice of the hearing date as well as an information brochure on the project entitled "North Bay Shortcut - Landowner's Handbook" to all owners and tenants along the proposed route. Landowners affected by recent deviations or identified through detailed title searches were also contacted by TransCanada. Partly as a consequence of landowner concerns, further route revisions and deviations were undertaken by TransCanada.

The Board acknowledges TransCanada's efforts with regard to the level of landowner notification on this project and encourages the initiative of preparing and distributing a landowner's handbook to those owners to be affected by the proposed construction. However, since the purpose of a landowner's information booklet is to provide the owner with an appreciation of not only the Company's policies but also the Board's procedures, it is requested that for future construction projects the Board receive a copy of any such landowner information package for review, prior to its distribution to landowners. The Board further

suggests that where possible the landowner information booklet should in future be given by TransCanada to all landowners known to be affected in advance of any public hearings to be held by the Board.

The Ministry of the Environment for the Province of Ontario, in a report entitled "Landowner Survey of the TransCanada PipeLines 1981 Facilities Application to the NEB", recommended that all landowners on alternative routes considered be generally notified of the Company's application for certification. TransCanada questioned the practicality of this suggestion and submitted that this would be an unnecessary involvement of property owners on preliminary routes rejected by the proponent prior to filing an application. The Board agrees with TransCanada on the impracticality of involving property owners on alternative routes for which Board approval is not being requested.

The Applicant's environmental consultant recommended that TransCanada designate one land agent per region as a Company representative who would be available to landowners before, during, and after construction of the proposed pipeline. TransCanada accepted this recommendation at the hearing and stated that it was Company policy to keep the same agent in an area at all times. TransCanada also accepted the consultant's recommendation that all landowners, particularly farmers, should be notified in advance of impending construction on their land to allow them to rearrange their activities if necessary. The Board endorses TransCanada's policy of retaining the services of the same land agent in the area during all phases of the construction of the proposed pipeline.

TransCanada in its landowner's handbook stated that a pre-construction report would be prepared in consultation with each landowner, outlining such items as type of farm operation, existing and currently planned drainage, and species and number of trees to be removed. The Applicant indicated that any reasonable provisions which were requested by the landowner would be included on this form. TransCanada stated that the information obtained in the pre-construction report would be added to the line list under the heading "Restrictions and Special Provisions". The provisions of the pre-construction reports would become part of the construction contract and the contractor would be bound by them.

TransCanada undertook to provide the Board with copies of all pre-construction reports and a continuous update of the special provisions included in the line list, up to and including the time of the clean-up phase. This would ensure that the Board would be aware of any further requests made by the landowners as construction progressed.

TransCanada stated that clean-up and restoration of the right-of-way would be performed by a specialized contractor with expertise in these matters. The Board supports TransCanada's policy of avoiding the sub-contracting of clean-up responsibilities to individual landowners, although it expects that landowners would be consulted as to the measures to be implemented on their individual properties.

Should a certificate be issued, the Board would require TransCanada, in accordance with its undertaking, to file, concurrent with the filing of plans, profiles and books of reference, copies of the pre-construction reports and an up-to-date line list. The Board would also require TransCanada to file as soon as they are completed all subsequent pre-construction reports and any changes made to the landowner line list up to the time that the "Approval of Clean-Up" document is signed by each landowner.

4.2.3 Landowner Participation

The hearing into this application included the participation of several landowners who would be affected by the proposed pipeline. The Board wishes to express its appreciation to those parties for their valuable contributions. In particular the Board has heard evidence, largely uncontradicted by TransCanada, that in some cases the Company's dealings with landowners have not measured up to what might be expected, in the form of agreements not respected and failures on the part of TransCanada to ensure that construction contractors live up to the commitments made to the Board by TransCanada.

The Board is of the view that these problems can only be prevented by increased attention on the part of TransCanada to the concerns of landowners. The level of environmental inspection proposed for this project, as well as the fact that the Board will receive copies of the pre-construction reports completed with landowners, should contribute to an improvement in this area. The

Board notes as well TransCanada's stated policy of having one land agent responsible for all contacts with an individual landowner. TransCanada should ensure that these agents are readily accessible so that concerns which arise during construction can be effectively communicated to the Company.

One intervenor, Mr. W.C. Haggart, asked the Board to consider the reimbursement to private intervenors of expenses incurred in taking part in the hearing. The Board is conscious of the possibility that such participation can represent a financial burden to individuals, but for the reasons given in a decision delivered in November 1981 in response to similar motions put forward in the Arctic Pilot Project application, must reiterate that it has no statutory authority to order the payment of costs.

4.3 Socio-Economic Matters

The Applicant provided the Board with an assessment of the regional socio-economic impacts of the project in the areas of the District of Nipissing, the County of Renfrew, and the National Capital Region. Benefits flowing to the regions because of the project would be associated primarily with business and employment opportunities. It was estimated that a total of 2,160 workers would be involved in the construction of the project with an average of 37 percent local labour participation. In terms of business opportunities, it was estimated that the project would result in direct expenditures of \$30 to \$40 million in the regions.

In sum, it was the Applicant's view that the project's small size and short construction period would result in modest benefits for the regions.

Adverse socio-economic impacts on the regions, also judged to be minor, were associated primarily with construction. To mitigate these impacts and to enhance beneficial aspects of the project, the Applicant undertook to implement a number of policies relating to regional and socio-economic matters. These include policies dealing with the provision of ambulance services, fire protection, local business opportunities, and location of work bases, although TransCanada declined to accept a recommendation that it provide for employee accomodation, since it felt that this should be the responsibility of the contractor.


The Board is of the view that implementation of the Applicant's policies would result in modest net socio-economic benefits for the regions affected.


DISPOSITION


Having regard to the foregoing considerations, findings and conclusions, and having taken into account all matters that appear to it to be relevant, the Board is satisfied that the additional pipeline facilities applied for by TransCanada are and will be required by the present and future public convenience and necessity.

Therefore, the Board is prepared, subject to the approval of the Governor in Council, to issue a Certificate of Public Convenience and Necessity in respect of the applied-for facilities, upon the terms and conditions set out in Appendix 2.

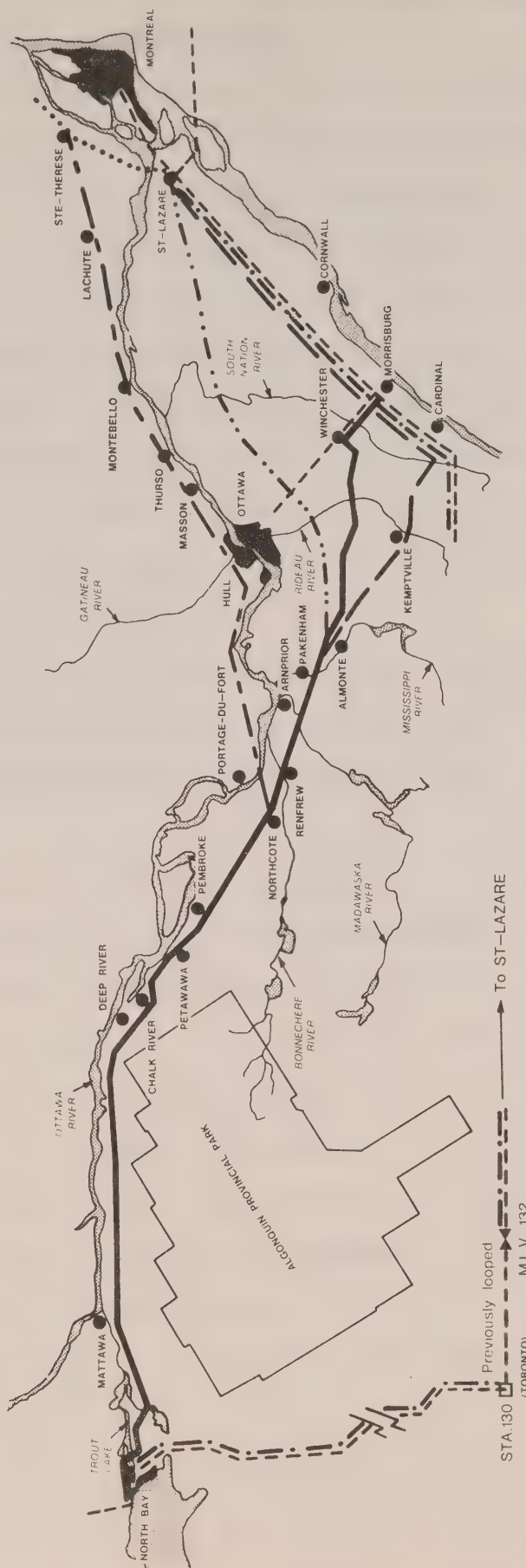
All of which is respectfully submitted.


R.F. Brooks
Presiding Member


J.R. Jenkins
Member


R.B. Horner
Member

TRANSCANADA PIPELINES LIMITED PROPOSED PIPELINE FACILITIES NORTH BAY SHORTCUT



- Existing TCPL LINES
- TransQuebec & Maritimes pipeline
- Alternative No. 1
- Alternative No. 2
- Alternative No. 3
- Alternative No. 4 (proposed route)
- Alternative No. 5

TERMS AND CONDITIONS

1. The pipeline facilities in respect of which this Certificate is issued ("the additional facilities") shall be the property of and shall be operated by TransCanada.
2. (1) TransCanada shall, unless otherwise authorized or ordered by the Board, cause the additional facilities to be designed, manufactured, located, constructed and installed in accordance with those specifications, drawings, and other information or data set forth in the Application or as otherwise adduced in evidence before the Board or approved pursuant to these Conditions, except as varied in accordance with subcondition (2) hereof.

(2) TransCanada shall cause no variation to be made to the specifications, drawings, or other information or data referred to in subcondition (1) without the prior approval of the Board.
3. TransCanada shall, unless otherwise authorized or ordered by the Board, implement or cause to be implemented all of the policies, practices, recommendations and procedures for the protection of farmlands and the environment included in the Application, the environmental reports filed as part of the Application, the TransCanada PipeLines Construction Specifications - 1981, the TransCanada PipeLines Environmental Protection Practices Handbook - 1979, or as otherwise adduced in evidence before the Board or approved pursuant to these Conditions, and shall not cause or permit

any change to the said policies, practices, recommendations and procedures without the prior approval of the Board.

4. TransCanada shall not commence the operations of

- (a) site preparation,
 - (b) trenching or excavation, or
 - (c) assembly and installation of pipe or other components,
- for any section, part, or component of the additional facilities until the Board has by order given TransCanada leave to proceed with that operation in respect of that section, part or component.

5. TransCanada shall file with the Board

- (a) concurrently with the filing of the plans, profiles and books of reference,
 - (i) one copy of every pre-construction report completed with a landowner up to the date of filing with the Board, signed by the landowners;
 - (ii) one copy of the current contractor line list, including all "Restrictions and Special Provisions" inserted at the request of landowners; and
 - (iii) a report describing, for each landowner who has not signed an option for easement, the current status of the negotiations, and
- (b) prior to the grant by the Board, pursuant to Condition 4, of leave to proceed with site preparation in respect of a section, part or component of the additional facilities, one copy of every pre-construction report

completed since the filing described in subcondition (a) with a landowner affected by that section, part or component, signed by the landowners, and all changes or additions made to the contractor line list applicable to that section, part or component since the filing described in subcondition (a), and

- (c) once each week during the construction of the additional facilities, until every landowner has signed a document indicating approval of the post-construction clean-up operations, any changes or additions made to the contractor line list during that week.

5. (1) TransCanada shall, at least 20 days prior to the commencement of any blasting of the trench in rock, file with the Board

- (a) a report satisfactory to the Board identifying the minimum amount of time during which rock trenches can reasonably be left open between blasting and pipeline installation, including a justification of the time specified, and if necessary a revised construction schedule, and
- (b) if in any location trenches would be left open longer than 7 days, a report satisfactory to the Board setting out the procedures proposed to be followed to prevent injury to persons, wildlife and the environment, including
 - (i) the locations where the trench would remain open longer than 7 days, identifying the length of time during which the trench would remain open,

- (ii) procedures for publication of notice of the existence of the open trench,
- (iii) the type and location of fences, warning signs, and other devices intended to prevent injury to persons or wildlife,
- (iv) a description of and the proposed spacing of access bridges and ditch plugs, and
- (v) measures for the control of the movement of water within and along the trench.

(2) TransCanada shall, prior to the commencement of the blasting of the trench in rock, obtain the approval of the Board for the construction schedule referred to in subcondition (1), if one has been submitted.

7. TransCanada shall, at least 20 days prior to the commencement of construction of the additional facilities, file with the Board

- (a) one copy of every contract, and every substantive amendment thereto, between TransCanada and a contractor for the construction of the additional facilities,
- (b) one copy of all construction drawings, and
- (c) one copy of all documentation provided to the contractor by TransCanada prior to the submission of a bid by that contractor,

with, at the option of TransCanada, prices and other proprietary information deleted.

8. (1) TransCanada shall, at least 20 days prior to the commencement of construction of the additional facilities, file with the Board the plans and procedures for cost

control on the project, including a detailed description of the frequency and format of interim reports to be provided to management.

- (2) TransCanada shall, unless otherwise authorized by the Board, file with the Board one copy of each interim report on cost control provided to the management of TransCanada during the construction of the additional facilities.

- 9. (1) TransCanada shall, at least 20 days prior to the commencement of assembly and installation of the additional facilities, file with the Board

- (a) the final specifications for line-pipe, pipeline components, and coating of the pipe,
- (b) a listing of standards and engineering specifications to be applied in the construction of the additional facilities, and
- (c) a map of the pipeline route indicating the population density at present, and forecast in the year 1992, identifying by kilometre post reference the specifications for the pipe to be installed;

- (2) TransCanada shall, prior to the commencement of assembly and installation of the additional facilities, obtain the approval of the Board for the material filed under part (a) of subcondition (1).

- 10. (1) TransCanada shall file with the Board

- (a) at least 20 days prior to the commencement of pipeline welding, detailed procedures for non-destructive testing of field welds of all line-pipe and pipeline components, including the method and frequency of testing, and

- (b) at least 10 days prior to the commencement of pipeline welding,
 - (i) the welding procedures expected to be qualified for the project,
 - (ii) documentation supporting the adequacy of the welding procedures referred to in clause (i),
 - (iii) the requirements for the qualification of welding procedures and for the qualification of welders,
 - (iv) the standards for acceptability of weld defects,
 - (v) the required mechanical properties for welds, and the requirements for metallurgical testing of welds,
 - (vi) a description of the duties and authority of all personnel involved in the testing of welds and in the interpretation of test results, and the requirements for qualification of such personnel.

- (2) TransCanada shall, prior to the commencement of pipeline welding, obtain the approval of the Board for the material filed under part (a) of sub-condition (1).

11. (1) TransCanada shall, at least 30 days prior to the commencement of site preparation for any river or stream crossing, file with the Board,
- (a) the construction schedule for the crossing,
 - (b) detailed drawings and specifications for the crossing, or if it is proposed to construct the crossing in accordance with typical drawings and specifications already filed with the Board, an identification of the typical drawings and specifications proposed,

- (c) all available geotechnical data relating to the crossing,
 - (d) the provisions proposed for mitigating environmental impacts, and for rehabilitation.
- (2) TransCanada shall, prior to the commencement of site preparation for any crossing, obtain the approval of the Board for the material filed under parts (a), (b) and (d) of subcondition (1) with respect to that crossing.
12. TransCanada shall, at least 48 hours prior to the commencement of site preparation for any river or stream crossing identified as Type III or IV in Table 2.5.3-1 of Exhibit 10 in the hearing held pursuant to Board Order No. GH-4-81, notify the Board and the Chairman of the Ontario Pipeline Coordination Committee by telephone or by telex of the expected date for the commencement of construction of the crossing.
13. TransCanada shall, at least 20 days prior to the commencement of construction of any meter station, file with the Board one copy of any construction contract and supporting documentation, between TransCanada and a contractor for the construction of the station, including one copy of all related construction drawings, with, at the option of TransCanada, prices and other proprietary information deleted.
14. TransCanada shall, unless otherwise authorized by the Board, file with the Board each month during the construction of the additional facilities, a report detailing the progress and current status of construction, and including a current construction schedule.

15. TransCanada shall, at a date to be set by the Board, submit a report satisfactory to the Board describing the implementation of the policies, practices, recommendations and procedures referred to in Condition 3, including a detailed description of any deviation from, and an assessment of the effectiveness of the said policies, practices, recommendations and procedures.
16. TransCanada shall, both during and after the construction of the additional facilities, monitor the effects of the construction on farmlands and the environment, and shall,
 - (a) within one year of the commencement of operation of the additional facilities
 - (b) prior to 1 November of the year of the second complete agricultural growing season after the commencement of operation of the additional facilities, and
 - (c) at such additional times as the Board may direct,unless upon application by TransCanada in any case a later date is set by the Board, submit reports satisfactory to the Board describing the effects observed and the actions taken or to be taken to mitigate any long-term damage caused by the construction.
17. TransCanada shall, at a date to be set by the Board, submit a report satisfactory to the Board providing

- (a) a detailed breakdown of the costs incurred in the construction of the additional facilities, in the applicable format used in Tab 5 under Tab "Facilities" of Exhibit 7 or Tab 4 of Exhibit 21, in the hearing held pursuant to Board Order No. GH-4-81;
- (b) in respect of each cost category included in Schedules 5 and 6 of Tab 5 under Tab "Facilities" of the said Exhibit 7, the percentage of Canadian content realized in comparison with that estimated and an explanation of any significant differences.

- 18. TransCanada shall, at the time of filing with the Board, serve on the Chairman of the Ontario Pipeline Coordination Committee one copy of the material referred to in Conditions 6, 11, 15 and 16, and parts (b) and (c) of Condition 7.
- 19. TransCanada shall cause the construction of the additional facilities to be completed on or before 31 December 1983, unless upon application by TransCanada a later date is set by the Board.

